

UG Exam Performance Feedback

Second Year

2017/2018 Semester 2

COMP28512 Mobile Systems

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Comments Q1: A wide range of marks were obtained though some of the simpler parts were not well answered. In fact less than 50% of the class answered the simplest part, i.e. Part (a), correctly. The part that was best answered was part (i) on CMOS technology which was based on the lecture given by Professor Steve Furber.

Q2: Again there was a wide range of marks, but many students had clearly not revised the material on MP3 and Huffman coding. Quite a few students got the Huffman coding example wrong, and produced instead a 'comma code' which is bound to be less efficient. Nevertheless, I was interested and surprised to learn (from the answers to part d) that for the example set, the comma code seems only slightly less efficient than a truly optimised Huffman code (37 % saving as opposed to 40%). A comma code uses variable length strings of zeros to identify symbols, using a 1 on the end as a comma for self-termination. Many students seemed unfamiliar with the terminology used in the signal processing part of this course. Frequency-domain and time-domain quantities were frequently confused. Particularly frustrating was the use of 'frequency' to mean a 'frequency component' or 'sinusoidal component'. A frequency is a frequency in cycles per second (Hz). A frequency component could refer to narrowband part of a signal as represented in the frequency-domain by a DCT or FFT coefficient.

Q3: Bearing in mind that this question, like Question 2, includes material covered in both lectures and laboratories, it was surprising that a better average was not obtained. As with Question 2, there was a significant group of students who seemed not to have revised this material. Although the majority did understand it, the significant number (about 25%) of marks of 5 or less out of 20, produced a lower than ideal average. This question was not difficult at all and cannot have come as a surprise given the prominence of error control issues during the course.
